



S/N 09/237,282

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daryl J. Orris et al. Examiner: C. SHERRER

Serial No.: 09/237,282 Group Art Unit: 1761

Filed: January 25, 1999 Docket: 1003.001US1

Title: **STABILIZATION PROCESS FOR COMBINING ETHYL ALCOHOL
AND ICE CREAM**

DECLARATION OF DR. DAVID SMITH

Assistant Commissioner for Patents

Washington, D.C. 20231

I, David Smith, am a Professor in the Department of Food Science and Nutrition at the University of Minnesota. I received a degree in Food Science from the University of Wisconsin at Madison in 1981. I state and declare as follows:

- 1) My name is David Smith.
- 2) I have read and reviewed U.S. Patent Application Serial No. 09/237,282, filed on January 25, 1999 titled "**STABILIZATION PROCESS FOR COMBINING ETHYL ALCOHOL AND ICE CREAM.**" (hereinafter, the "Application")
- 3) I have read the Office Action mailed on November 11, 2000 in the Application, and I have read and reviewed the Nakaya et al. reference (U.S. Patent No. 4,988,529), the specification of the application, and Arbuckle (Ice Cream, pp 23-27, etc.).
- 4) I have discussed the rejections set out in the Office Action mailed on November 11, 2000 with Mark A. Litman, the attorney of record in the Application.
- 5) Based on discussions with Mark A. Litman, I designed and personally performed an experiment to investigate the effects of the order in which steps are performed in the mixing of materials, including ice cream materials and alcohol solutions.



6) The experiment designed and performed by me was as follows:

- a) A batch of a base mix, using a formulation included in the claims of the Application, comprised:

Milk Fat	14.4%
Milk Solids non-fat	10%
Sugar	15%
Stabilizer	0.3%

- b) To aliquots of this batch mix were added at about 10% by weight of either crème de cocoa (9.13%) and crème de menthe (8.73%).
- c) Separate alcohol/batch samples were prepared by either chilling the liquor to less than 40°F before addition (according to the invention) or by adding the liquor at room temperature (comparison).
- d) The liquor/batch mixtures were then frozen in a home freezer at less than 0°F.
- e) The properties and quality of the different mixtures were then compared.
- f) The liquor/batch mixtures were then evaluated for a) mouth feel immediately after mixing (Pre-Freeze Viscosity); b) the appearance was evaluated for air pockets in the composition) after freezing (Appearance), and then products were warmed for one-half hour at room temperature and again evaluated with regard to texture and visual appearance.
- g) The results of the comparison are shown in the following table.



TEST	PRE-CHILLED LIQUOR	ROOM TEMP. LIQUOR
Pre-Freeze Viscosity	More Viscous	Less Viscous
Appearance	No Pockets	Pockets/voids visible
Mouth Feel	Satisfactory	Satisfactory
Rewarmed Appearance	Uniform Blend	Separated/Separating

h) The significance of the test results can be summarized as follows:

- 1) The initial higher viscosity has been traditionally desired within the industry because of the belief that the higher viscosity produces a better product.
- 2) The presence or absence of air pockets is important to both distributors and end users. Air pockets indicate a poorly prepared product, wasted space, and poor quality.
- 3) The appearance and existence of separations between ingredients (in this case, the liquor could be separating from the batch material) gives an indication of poor quality, poor stability, and incomplete mixing of ingredients.

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- i) The differences in results identified in the table above are clear to those skilled in the art. The results show that pre-chilling of the liquor additive produces both the appearance and actuality of improvements in properties in the mix of alcoholic beverages and the designed ice cream blend.

Further Declarant Sayeth Not

Signed  Date 3-9-01

David Smith